

2.2 Worksheet #2 - More Power Rule Practice

Compute the derivatives of the following functions.

$$(1)f(x) = x^2 - 2$$

$$(2)f(x) = x - x^3$$

$$(3)f(x) = x^2 + 3x - 6$$

$$(4)f(x) = 2x^2 - 4$$

$$(5)f(x) = \frac{2}{x}$$

$$(6)f(x) = \frac{4}{x^2} - \frac{x^2}{4}$$

$$(7)f(x) = 2x^{10} - 4x^2$$

$$(8)f(x) = 3\sqrt{x}$$

$$(9)f(x) = x\sqrt{3}$$

$$(10)f(x) = \frac{x^4}{4} + x - 2$$

$$(11)f(x) = x(x + 1)$$

$$(12)f(x) = x^2 - e^2$$

$$(13)f(x) = 5x^3 - \frac{5}{x^3}$$

$$(14)f(x) = (6x + 5) - (3x + x^2) \quad (15)f(x) = 2x^2 - 5x + 10$$

$$(16)f(x) = x - \frac{1}{x}$$

$$(17)f(x) = 4x^{\frac{5}{2}}$$

$$(18)f(x) = 1 - 5$$

$$(19)f(x) = \frac{1}{3x}$$

$$(20)f(x) = \frac{x^2}{2} - 3x$$

$$(21)f(x) = 5^2$$

$$(22)f(x) = (x^2 + 1)^2$$

$$(23)f(x) = x^{1000}$$

$$(24)f(x) = \frac{1}{x^{1000}}$$

$$(25)f(x) = \frac{x^2}{\ln(2)}$$

$$(26)f(x) = \sqrt{3x}$$

$$(27)f(x) = \sqrt{7}$$

$$(28)f(x) = \frac{x^2-1}{x}$$

$$(29)f(x) = \frac{8}{\sqrt{x}} - 3x$$

$$(30)f(x) = \frac{7x+3x^2}{5\sqrt{x}}$$